

Date: Fri, 17 Sep 93 11:37:41 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #1107
To: Info-Hams

Info-Hams Digest Fri, 17 Sep 93 Volume 93 : Issue 1107

Today's Topics:

 CW and DSP (2 msgs)
 Filters for TS-530
 HTX-202;good radio, crappy manual!
 Info needed PRC6 and PRC6/6
 Mawrisse Koad
 need expert info on nicads. (3 msgs)
 Question about ni-cads (was Re: need expert info on nicads.)
 R-100 Comments Requested
 There goes the rest of 20M

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 15 Sep 1993 20:16:52 GMT
From: dog.ee.lbl.gov!agate!howland.reston.ans.net!spool.mu.edu!olivea!korie!
newscast.West.Sun.COM!abyss.West.Sun.COM!sunspot!myers@network.ucsd.edu
Subject: CW and DSP
To: info-hams@ucsd.edu

In article 93Sep14130428@wahoo.ccr-p.ida.org, n4hy@wahoo.ccr-p.ida.org (Bob McGwier) writes:

>
>

>Ringing is NOT what is happening in an FIR filter. A narrowband crystal
>or other IIR filter, when fed energy from noise is almost like an oscillator
>and the damping in the oscillator is overcome by the energy supplied by
>the noise. This is a true ringing. In a very narrow FIR filter, you

>DO filter the noise power and get noise limited to the pass band of the
>filter but it will not 'almost oscillate.'

An FIR filter can not oscillate. Since an FIR filter has no feedback paths,
the conditions for oscillation do not exist. However, I would think that if
you build an FIR filter which implements the impulse response of a very high-Q
IIR filter which does tend to ring, the FIR will also appear to ring.

Isn't this true, Bob?

* Dana H. Myers KK6JQ, DoD 466 | Views expressed here are
*
* (310) 348-6043 | mine and do not necessarily *
* Myers@Cypress.West.Sun.Com | reflect those of my employer
*
* This Extra supports the abolition of the 13 and 20 WPM tests *

Date: 15 Sep 93 17:41:37 EDT
From: hayes!bcoleman@uunet.uu.net
Subject: CW and DSP
To: info-hams@ucsd.edu

In article <CDBH7B.23s@stortek.com>, georgen@stortek.com (George Noyes x5698)
writes:

>
> CW - 100 Hz and 300 Hz BW work as advertised. Ringing is only marginally
> better than most crystal filters (yes, sharp filters ring, even dsp units
> see basic filter theory 101 - linear phase doesn't say anything about ringing).

I thought only feedback-type filters could ring. (ie IIR filters) I don't
see how an FIR filter could ring, and they have linear phase response.

Of course, it takes a lot more "taps" in an FIR filter to get the job done
compared to an IIR filter. And processing power.

--

Bill Coleman, AA4LR ! CIS: 76067,2327 AppleLink: D1958
Principal Software Engineer ! Packet Radio: AA4LR @ W4QO
Hayes Microcomputer Products, Inc. ! UUCP: uunet!hayes!bcoleman
POB 105203 Atlanta, GA 30348 USA ! Internet: bcoleman%hayes@uunet.uu.net
Disclaimer: "My employer doesn't pay me to have opinions."
Quote: "The same light shines on vineyards that makes deserts." -Steve Hackett.

Date: 17 Sep 93 04:24:38 GMT
From: ogicse!uwm.edu!cs.utexas.edu!math.ohio-state.edu!magnus.acs.ohio-state.edu!
magnus.acs.ohio-state.EDU!hcheyney@network.ucsd.edu
Subject: Filters for TS-530
To: info-hams@ucsd.edu

Has anyone installed and used the 1.8kHz filter option for SSB on a Kenwood TS-530. I would like to know if this is a worthwhile improvement for SSB copy on QRM laden bands like 20m and 40m or is 1.8 too sharp for good speech intelligibility ? Anyone have one for sale (YK-88SN).

Harold, N80CM

Internet: Cheyney.1@osu.edu

Date: 17 Sep 93 17:53:35 GMT
From: news-mail-gateway@ucsd.edu
Subject: HTX-202;good radio, crappy manual!
To: info-hams@ucsd.edu

Phil wrote:

>Just purchased a Radio Shack HTX-202. Not a bad radio, all considered,
>though I wish it could transmit a touch-tone sequence on each PTT (which
>would parallel the receive-DTMF squelch). But, the manual stinks.

It needs work to be sure!

>How do I put a different tone on each channel?

While setting up to program a channel (you're still in VFO mode), enter the menu and select the entries for rcv & xmit PL and enter the appropriate value. You can do this at anytime time before committing to memory. In this same manner, you can alter on a per channel basis, any of the menu parameters you desire to be different.

>Are there any other hidden gotchas or features in this thing? It feels like
>I've been given half a map to the Great Underground Empire.

Since you haven't really identified what you understand about it so far I couldn't hazard a guess as to what you don't!

73
Paul
WB2OYC
ar..

Date: Thu, 16 Sep 1993 22:40:27 CET
From: galaxy.ucr.edu!library.ucla.edu!agate!howland.reston.ans.net!xlink.net!
gmd.de!dearn!esoc!estec!rgreenwo@network.ucsd.edu
Subject: Info needed PRC6 and PRC6/6
To: info-hams@ucsd.edu

Does anyone in the U.S of A know if the PRC6/6 (circa 1965) known as the
"Banana" 50Mhz FM tube walkie talkie was used by the Army? I am looking for an
English language manual. The PRC6/6 is a six channel version of the PRC6
It was made in Europe by SEL. If someone can help with a service manual
I would reimburse the cost of copy and mailing. I have a PRC6 single channel
manual but the machines are very different. 73 Robin. PA3ACQ/G3LBA

Date: Thu, 16 Sep 93 19:59:23 GMT
From: mercury.hsi.com!a3bee2.radnet.com!cyphyn!randy@uunet.uu.net
Subject: Mawrisse Koad
To: info-hams@ucsd.edu

dstock@hpbqmoqa.sqf.hp.com (David Stockton) writes:

snip!
:
.....improvement. I don't mean spelling or grammar, I'd just like to
: encourage interesting QSOs and discourage "Rubber stamp" contacts.
:
:
: Cheers,
: David

So would I....and I'm not fussy about grammer or spelling...as long as I
can figure out what they are saying.....

--
Randy KA1UNW If you get a shock while
 servicing your equipment, "Works for me!"
randy@192.153.4.200 DON'T JUMP! -Peter Keyes
 You might break an expensive tube!

Date: Thu, 16 Sep 93 20:16:19 GMT
From: mercury.hsi.com!a3bee2.radnet.com!cyphyn!randy@uunet.uu.net

Subject: need expert info on nicads.
To: info-hams@ucsd.edu

gary sed (some snipped out)

: It's best to deep discharge individual cells. That way you can safely
: go all the way down to zero volts.

:

: Gary

To zero? I thought it was unwise to run them down to zero.

Or am I thinking of lead acid cells?

--

Randy KA1UNW

If you get a shock while
servicing your equipment,

"Works for me!"

randy@192.153.4.200

DON'T JUMP!

-Peter Keyes

You might break an expensive tube!

Date: Wed, 15 Sep 1993 17:47:12 GMT

From: ncr gw2.ncr.com!ncrhub2!ncratl!AtlantaGA.NCR.COM!Wayne.Orwig@uunet.uu.net

Subject: need expert info on nicads.

To: info-hams@ucsd.edu

In article <m9c3n8INNar@exodus.Eng.Sun.COM> falk@peregrine.Eng.Sun.COM (Ed Falk)
writes:

>Hi all; I figured these newsgroups would be the best source for information.

----- (probably not) -----

> 1) it's very, very bad to reverse polarity on a nicad. For this
> reason, completely discharging a device with multiple cells is
> very bad, because if one cell has slightly less charge than the
> rest, that one cell will be charged backwards by the others.
> Once this happens, the cell is destroyed because internal shorts
> form in the cell.
> (deleted stuff about matched cells and bad experience)

Yes, it is very bad to reverse polarity a cell. That is why worrying too much
about memory effect and draining a pack all of the time may cause you MORE
problems than it corrects.

> 2) It's almost as bad to over-charge a nicad. This is where the
> cheap R*d** Sh*ck charger I use is causing me problems.

> Detecting a full charge condition is rather tricky. This can be
> done by watching for a temperature increase in the cell, or a
> small voltage decrease towards the end of the charge cycle.

It you charge a sealed nicad at a .1C rate, you should be able to leave it on charge indefinitely. I have a cordless soldering iron on charge at .1C now, it is over 10 years old. The R*d** Sh*ck charger should be a .1C charger, so it won't harm cells. Fast chargers are another story.

> Charging cells in series can cause problems because some cells
> will reach full charge (and beyond!) before the others. Again,
> a prevention is to make sure all cells are a matched set.

If you charge them at .1C, and leave them on a longer than needed (at least 16 hours), you will balance the charge in all cells and not harm anything.

> 3) There is a memory effect, in which a nicad which is charged
> and discharged on a very consistent cycle will eventually reach
> a state where it can no longer be discharged below it's habitual
> discharge point. This effect is very slight, and was originally
> observed in satellites

Yes, the effect is very slight, but if you are flying a valuable plane, you should test for it. If you are always running your batteries down, you are taking care of it.

> 4) The prevention for the memory effect is to ocassionally put
> the cells through a deep discharge. However, doing this by
> running a device down completely with the cells installed can
> destroy cells (see (1) above.) For this reason, deep discharge
> is not such a good idea, unless you discharge each cell
> individually.

>Someone please correct me if I have any of the above wrong.

Pretty close.

>At any rate, it seems to me that the ideal nicad battery charger would operate
>as follows:

> 1) all cells charged individually, rather than in series.

What a hassle. You will probably have more connection problems than what you fix in battery problems. (and NEVER parallel nicads during charge)

> 2) Deep cycle: discharge the battery at a fixed current until the
> voltage drops to some threshold.

Fixed or variable current doesn't matter, it just makes capacity calculating easier at a fixed rate. If you use about 1.1 volt PER CELL as the cut off point, you can discharge entire packs with little to fear from reverse charge, and yet that is enough to get rid of memory effect.

> 3) Charge: charge the battery at a fixed current until the
> voltage climbs to some threshold.

If you use a voltage cutoff, you can never reach full charge. If your voltage cutoff fails to detect that SMALL fractional voltage change, the voltage will fall BACK DOWN and the charge will continue forever. Peak detect chargers fix most of these problems.

> 4) Maintain: hold the cell at a specific "full charge" voltage.

Easy, just use a .1C charger and leave it on charge continuously.

>Does this make sense?

>As you've probably guessed by now, I'm planning to design and build my
>own charger -- one that does it RIGHT for a charge. Can anybody tell
>me what the lower (discharge) and upper (full charge) voltages should
>be? Can anybody tell me what good discharge and charge currents should
>be? (I'll be mainly using this to charge AA's for my camera gear.)

Most .1C chargers do it right, Most FAST chargers DON'T do it right. As for the voltages, they change with manufacturers and temperature. Use .1C (@ with a 500ma AA, charge at 50ma) for 16 hours for charging. As for fast charging, it depends on the cell type. A good fast charger would use temperature and peak voltage detection.

>Of course, a pointer to a consumer charger that does the same job
>would be nice too.

Date: 17 Sep 93 13:44:57 GMT

From: ogicse!uwm.edu!caen!usenet.cis.ufl.edu!eng.ufl.edu!helios.tcad.ee.ufl.edu!
thoman@network.ucsd.edu

Subject: need expert info on nicads.

To: info-hams@ucsd.edu

In article <1993Sep16.201619.9165@cyphyn.radnet.com>, randy@cyphyn.radnet.com
(Randy) writes:

|> gary sed (some snipped out)

|>

|> : It's best to deep discharge individual cells. That way you can safely

|> : go all the way down to zero volts.

|> :
|> : Gary
|> To zero? I thought it was unwise to run them down to zero.
|>
|> Or am I thinking of lead acid cells?
|>

 You're thinking of a battery of series-connected cells, in which draining the battery to zero will inevitable reverse charge (and thus damage) some of the cells.

 An individual cell can be discharged to approximately zero without damage but should be recharged immediately. Note the use of "approximately" above, though.

Greg Thoman: The opinions expressed herein are mine alone, and I am solely irresponsible for them.

Date: Wed, 15 Sep 1993 21:00:00 GMT
From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!
sol.ctr.columbia.edu!news.kei.com!ub!dsinc!gvls1!rossi@network.ucsd.edu
Subject: Question about ni-cads (was Re: need expert info on nicads.)
To: info-hams@ucsd.edu

I have a question about ni-cads....

Why has their never been a standard developed for ni-cad battery packs?

I can't figure out why every manufacturer needs to use his own custom, proprietary, ni-cad battery pack. Years ago they settled on a set of standard sizes (D, C, AA, AAA, and 9 volt, etc) for regular batteries. Why can't they do the same thing for ni-cad battery packs???

Just think about it. Almost every camcorder uses a different battery pack. Icom, Kenwood, Yaesu, Alinco, etc, each have their own custom line of battery packs for their radios. You can't interchange them. Why not? For the most part, electrically (inside) they are all identical.

Every flashlight uses common D or C cells. Most all portable radios, etc, uses common AA cells or one of the other common sizes. But when it comes to ni-cads they have to use a custom designed size pack for each product.

Imagine if every flashlight needed a different size battery. WHAT A MESS!!

Just a thought.

=====
Pete Rossi - WA3NNA rossi@vfl.paramax.COM

Unisys Corporation - Government Systems Group
Valley Forge Engineering Center - Paoli, Pennsylvania
=====

Date: Thu, 16 Sep 93 07:03:38 MST
From: cs.utexas.edu!asuvax!ennews!stat!david@uunet.uu.net
Subject: R-100 Comments Requested
To: info-hams@ucsd.edu

I am thinking about buying a ICOM R-100 Scanner ... would appreciate
receiving email from any owners with comments.

73, David

Internet: david@stat.com FAX: +1 (602) 451-6135
Bitnet: ATW1H@ASUACAD FidoNet=> 1:114/15
Amateur Packet ax25: wb7tpy@wb7tpy.az.usa.na

Date: 15 Sep 1993 22:26:44 GMT
From: olivea!korie!newscast.West.Sun.COM!abyss.West.Sun.COM!sunspot!
myers@uunet.uu.net
Subject: There goes the rest of 20M
To: info-hams@ucsd.edu

In article BKu@cbnewsm.cb.att.com, jeffj@cbnewsm.cb.att.com (jeffrey.n.jones)
writes:

>In article <1993Sep15.134932.595@mnemosyne.cs.du.edu> lkollar@nyx.cs.du.edu
(Larry Kollar) writes:

>>(repeater and otherwise) tailored to the local when necessary. Discussing
>>politics & religion over the air (controversy!), for example, is something
>>that can really get you zapped. It happened to a good friend of mine.

>

>Hence the reason why I won't discuss them over the air.

>

Hmmm.... these are the reasons why I *do* discuss them over the air.

: -)

* Dana H. Myers KK6JQ, DoD 466 | Views expressed here are
*
* (310) 348-6043 | mine and do not necessarily *
* Myers@Cypress.West.Sun.Com | reflect those of my employer
*
* This Extra supports the abolition of the 13 and 20 WPM tests *

Date: 17 Sep 93 13:16:10 GMT
From: mnemosyne.cs.du.edu!nyx!lkollar@uunet.uu.net
To: info-hams@ucsd.edu

References <1993Sep14.185007.21606@cyphyn.radnet.com>, <john.748060107@misty>,
<dparkerCDGK8B.82G@netcom.com>
Subject : Re: Neighborhood watch groups

>>>: Or...establish your OWN repeater.

>>

>>>OH? On what freqs? There are none left that won't QRM existing ones.

>>

>>I don't think a repeater is needed. Most neighborhood watch groups only cover
>>an area of less than 1/2 mile in extent, so HT's should work fine, and if
>>needed, a base station could handle relays.

How about using one of those dual-band mobiles that have a crossband repeater
feature? Park the car on top of a hill and have at it.

(This, of course, depends on everyone having dual-band HTs. I sure don't. :-)

--

Larry Kollar, KC4WZK | I like CW, but that doesn't mean I think every ham
lkollar@nyx.cs.du.edu | should have to learn it.

"You mean you came back from the dead, to tell me I'm *odd*?"

Date: Thu, 16 Sep 1993 23:30:37 GMT
From: galaxy.ucr.edu!library.ucla.edu!agate!howland.reston.ans.net!
vixen.cso.uiuc.edu!newsrelay.iastate.edu!news.iastate.edu!tremplo.gis.iastate.edu!
willmore@network.ucsd.edu
To: info-hams@ucsd.edu

References <m9c3n8INNar@exodus.Eng.Sun.COM>, <CDDADu.3qF@cnsnews.Colorado.EDU>,
<1993Sep15.224024.9374@ke4zv.atl.ga.us>.ias
Subject : Re: need expert info on nicads.

gary@ke4zv.atl.ga.us (Gary Coffman) writes:

>This isn't always safe advice. I had a battery rupture that was on a
>45 ma trickle for a year. Overnight is probably fine, but forever is
>a bit too long to keep a Nicad charging. Even at 45 ma they do eventually
>dry out and fail. I've had HT packs sitting in the trickle charger for
>a couple of weeks that didn't have any capacity when I tried to use
>them. And they were relatively new packs too. Unlike lead acid cells
>which will quickly die if not kept charged, Nicads are best stored
>discharged. If stored charged, they usually lose about 10% of their
>charge per month. I wouldn't trickle at a higher rate than that if
>I were going to leave them on charge forever. Note that that's not
>C/10, that's C/720. Any time you overcharge a Nicad, you cause
>outgassing, however slight, and prolonged overcharging, even at a
>trickle rate, will damage the battery.

I've got a little problem with your assertion that NiCd's should be
stored discharged. If you store a NiCd charged, the little crystal
"dendrites" that naturally form internally get blown to bits as soon
as they form. If you don't keep the battery charged, these little
dendrites will continue to form--shorting the battery and killing it.

Am I misunderstanding what you have said or do we actually have a
disagreement?

Cheers,
David
--

willmore@iastate.edu | "Death before dishonor" | "Better dead than greek" |
David Willmore | "Ever noticed how much they look like orchids? Lovely!" |

Date: Wed, 15 Sep 1993 19:54:25 GMT
From: olivea!news.bu.edu!att!cbnews!jeffj@uunet.uu.net
To: info-hams@ucsd.edu

References <1993Sep14.135910.15580@mnemosyne.cs.du.edu>,
<1993Sep14.200600.1095@ke4zv.atl.ga.us>,
<1993Sep15.134932.595@mnemosyne.cs.du.edu>
Subject : Re: There goes the rest of 20M

In article <1993Sep15.134932.595@mnemosyne.cs.du.edu> lkollar@nyx.cs.du.edu (Larry

Kollar) writes:

>(repeater and otherwise) tailored to the local when necessary. Discussing
>politics & religion over the air (controversy!), for example, is something
>that can really get you zapped. It happened to a good friend of mine.

Hence the reason why I won't discuss them over the air.

73!

Jeff

--

Jeff Jones	AB6MB		OPPOSE THE NORTH AMERICAN FREE TRADE AGREEMENT!
jeffj@seeker.mystic.com			Canada/USA Free Trade cost Canada 400,000 jobs.
Infolinc BBS 510-778-5929			Want to guess how many we'll lose to Mexico?

Date: Wed, 15 Sep 1993 21:53:18 GMT
From: library.ucla.edu!agate!spool.mu.edu!news.nd.edu!dvorak!
rnimtz@network.ucsd.edu
To: info-hams@ucsd.edu

References <747490498.AA02666@buscard.fidonet.org>, <randall.747960896@infmx>,
<1993Sep14.164255.29811@ke4zv.atl.ga.us>
Subject : Re: CB Linear for sale: How to report?

In article <1993Sep14.164255.29811@ke4zv.atl.ga.us> gary@ke4zv.UUCP (Gary Coffman)
writes:

>
>On the other hand, a certain CBer who shall
>remain nameless runs a 5 kW plate modulated transmitter that
>could pass an FCC broadcast proof of performance. In fact it
>has passed a facsimile of a proof, I've seen the scope pictures
>to prove it. None of his neighbors experience any interference.
>Of course any CBer unfortunate enough to try to talk over him
>tends to get squashed. :-)
>

Did the nameless CBer do his own proof of performance or did he hire a
contract engineer? :)

Rick Nimtz
nimtz.1@nd.edu
N9TJG

Date: 17 Sep 93 13:58:24 GMT
From: ogicse!uwm.edu!caen!usenet.cis.ufl.edu!eng.ufl.edu!helios.tcad.ee.ufl.edu!
thoman@network.ucsd.edu
To: info-hams@ucsd.edu

References <m9c3n8INNar@exodus.Eng.Sun.COM>, <1993Sep17.001257.6512@trl.oz.au>,
<27c4bt\$s93@noknic.nokia.com>n
Subject : Re: "Rate" on nicads?

In article <27c4bt\$s93@noknic.nokia.com>, vahapassi@caroline.trs.ntc.nokia.com
(Vahapassi Jussi) writes:
|> In article <1993Sep17.001257.6512@trl.oz.au>, handers@rhea.trl.OZ.AU (Howard
Anders) writes:
|> > As long as you charge no faster than the 15hr rate i.e. Capacity in AH/10,
|> *****
|> Silly me, but what is a "XX hr rate"? Say, a 600 mAh cell is charged at 60 mA,
|> then what is the "rate"? What if the current is 100 mA?
|>

The xx hour "rate" is the charging current which will recharge
the battery in xx hours. You'll run into two uses of this, since the
amount of energy required to recharge the battery is considerably
larger than the nominal amp-hour capacity.

In one case, you divide the battery's capacity by xx hours to
get a charging current and call that the "xx hour rate"... but you then
have to charge for more than xx hours to fully recharge the battery.
For instance, a 500 mAh NiCd has a ten-hour charge rate of $0.500 / 10 = 50$ mA,
but a full recharge takes 14 hours. This is the version I
usually see people use.

The other point of view would be to use the actual recharge time,
but I don't recall ever seeing that used in print.

Greg Thoman: The opinions expressed herein are mine alone, and I am
solely irresponsible for them.

End of Info-Hams Digest V93 #1107
